Northwest Territories Beverage Container Recovery

Discussion Paper

May 2001

Northwest Territories Resources, Wildlife and Economic Development

Introduction

More than 25 million ready-to-serve drinks are sold in the Northwest Territories (NWT) every year. Empty containers from juice, pop, bottled water and other drinks often end up in the garbage or littering our communities.

Several NWT municipalities, organizations, and residents have said they want the government to set up a beverage container recovery program. These groups and individuals want drink containers to be reused and recycled, not put in the garbage.

The benefits of a beverage container recovery program include less litter in communities and less garbage in landfills. It is better for the environment if the glass, plastic, aluminum, and other materials that containers are made from are reused or recycled. A beverage container recovery program could also provide employment and business opportunities.

The Government of the Northwest Territories (GNWT) wants to develop and implement a beverage container recovery program in the NWT. This Discussion Paper outlines some of the elements that need to be considered to develop such a program. It also proposes one option for how a beverage container recovery program might operate in the NWT.

We want your input and look forward to hearing your comments. Please forward your comments about a beverage container recovery program for the NWT by June 30, 2001 to:

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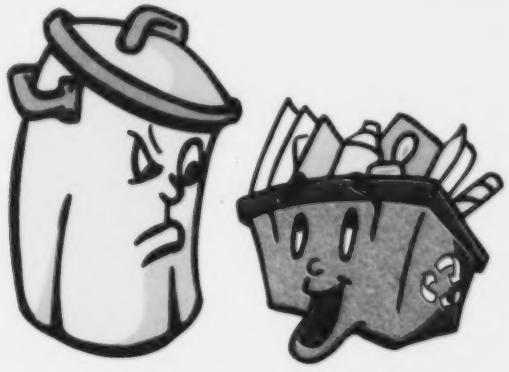


Benefits for the NWT

Beverage container recovery can contribute to economic development opportunities and a healthier environment.

Employment and Economic Opportunity

Recycling provides employment. Research shows there is ten times more employment with recycling than with landfilling. Raven Recycling, the main processing centre in Whitehorse, employs about 20 people. In the NWT, a beverage container recovery program could provide over $500,000 in salaries and wages.

Businesses in the NWT could develop markets for recycled materials. The Yukon has developed local markets for glass. Yellowknife Glass Recyclers is an example of a NWT business that turns empty bottles into glasses, vases, and other items for sale. There is potential to do research, and to develop other businesses and other markets.

A Healthier Environment and Better Waste Management

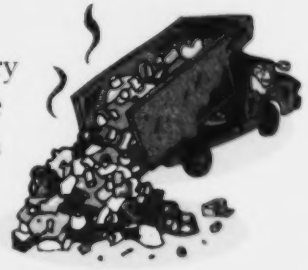
Reusing and recycling has a positive effect on the environment. For example, manufacturing aluminum cans from 100% recycled material takes only 5% of the energy needed to make aluminum cans from raw materials. This means less greenhouse gases and other pollution.

Beverage container recovery programs mean less garbage in landfills, so landfills last longer.

In other jurisdictions, beverage container recovery programs have led to increased awareness of and participation in a variety of recycling efforts. For example, a recent Nova Scotia survey found 92% of the public support the principles of waste reduction, 97% regularly participate in the 3Rs (Reduce, Reuse, Recycle) and 80% are more aware of recycling issues than one year ago.

In other jurisdictions, the system that collects empty beverage containers is often used to collect other materials for reuse or recycling. For example, Alberta depots collect waste oil; Saskatchewan depots collect milk cartons; Yukon depots take other recyclable materials and ship them to Raven Recycling in Whitehorse for processing and recycling.

Very little work has been done in this area in the NWT. Beverage container recovery inspires individuals, government, agencies and organizations, and business to become more involved with other initiatives to reduce, reuse or recycle other 'waste' materials. This has been the case in every other location where this type of program exists.

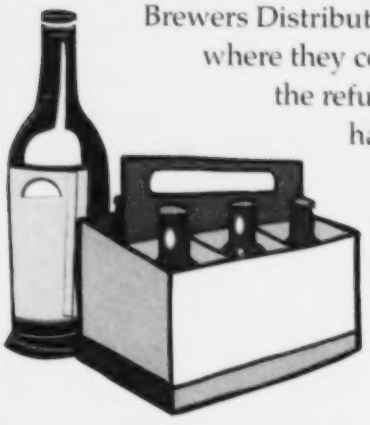


Reuse and Recycling in the NWT

Currently, there is limited reuse and recycling in the NWT. Some of these initiatives are:

NWT Liquor Commission Deposit/ Refund – A deposit is charged on all liquor, wine, and beer containers. Businesses in Yellowknife, Fort Simpson, Hay River, Fort Smith, and Inuvik have a contract to collect these containers and give out the refunds. The contractors get $.02 per container for handling fees and they keep any money they make from the sale of materials. There is no requirement to recycle and most of the glass and plastic collected is sent to landfills. Some of the contractors recycle other materials such as paper. There are no standards of operation. The contractors organize and pay for transportation.

NWT consumers pay a $.10 deposit on Brewers Distributing refillable bottles. NWT Liq or Commission contractors collect these bottles and usually pay a partial refund that varies from community to community. They transport the empty containers to Brewers Distributing in Alberta where they collect the cost of the refund and a small handling fee.



Non-profit Groups – Non-profit groups in some communities are involved in recycling. For example, in Norman Wells, the Girl Guides collect and store cans and bottles to raise money for their group. They shred, bag, and ship containers by barge and truck to Edmonton and Hay River.

The Inuvik Recycling Society was recently formed to promote 'Reduce, Reuse and Recycle', and to collect materials for recycling. They plan to recycle materials that have the most impact on the environment. Materials will get shipped to Raven Recycling in Whitehorse.

Municipal Government – The City of Yellowknife operates a drop-off recycling program. There are three drop-off sites in the City and one at the landfill site. The City collects, bales, and ships newsprint, paper, appliances, aluminum, and plastic milk jugs. Batteries and waste oil are collected, stored and shipped to Edmonton.

Recycling groups, other non-profit organizations, local and Aboriginal government, or businesses may want to become involved with beverage container recovery in the NWT. The motivation will be financial and/or environmental. It has been successfully demonstrated across the country that beverage container deposit/refund can increase the capacity of recycling programs to deal with other materials.

Elements of a Beverage Container Recovery Program

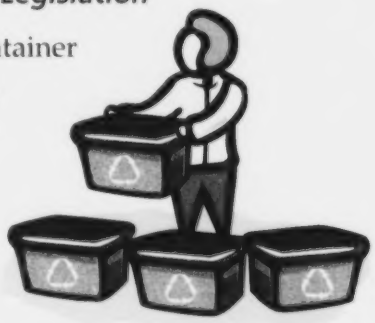
The GNWT has researched the beverage container recovery programs of Canadian provinces and the Yukon. Appendix I defines the words that are commonly used. Appendix II is a summary of Canadian programs. The research helped to identify the basic elements of a beverage container recovery program.

The Method Used to Collect Empty Containers

Two different methods are used in Canada to collect empty drink containers: curbside collection and deposit / refund. With curbside collection or the 'blue box' system, containers are collected with other recyclable materials and there is no deposit or refund. A deposit / refund system usually has a separate collection system. Consumers are motivated to return containers because they pay a deposit when they buy a drink and get a refund when they return the empty container.

Research shows recovery rates range from 76% to 98% with deposit / refund systems, and from 30% to 50% with curbside collection. Higher deposits and refunds usually produce higher recovery rates.

Voluntary Program or Based on Legislation



Beverage container recovery can operate on a volunteer basis or through government legislation. Curbside collection systems usually don't have legislation. Deposit / refund programs usually have legislation. The NWT Liquor Commission deposit / refund program is one exception. As the sole distributor, the Liquor Commission can successfully initiate and implement the program voluntarily.

Legislation can give authority to the program. Legislation is effective in creating a 'level playing field' where all beverage manufacturers, bottlers, wholesalers, and distributors are made to play by the same rules.

What Containers Are Part of a Deposit/Refund Program?

Drink containers that are included in a deposit / refund program are called designated containers. In most provinces and the Yukon, designated containers include all ready-to-serve drinks except milk.

People pay a deposit when they buy a beverage and get a refund when they return the empty container. Deposits in Canada range from $.05 to $.80 depending on the size and type of container. The refund is sometimes the same amount as the deposit and sometimes it is less than the deposit. Refunds in Canada range from $.03 to $.40.

Who Collects the Empty Containers?

In a deposit / refund system, empty containers are collected at a depot or a retail store. Usually every community has at least one place to take empty containers. Depots have a contract to:

- Operate according to standards set by legislation or the program administrator.
- Collect containers and pay the required refund for designated containers.
- Sort, bag, and store containers until they go to a processing centre.
- Record and report the number of containers collected and refunds paid.

Depots need security so that people can't steal the containers and get another refund.

What Happens to Empty Drink Containers After They Are Collected?

In a deposit / refund system, empty containers usually go from the depot or retail store to a central location or a processing centre. There are usually two or three processing centres in a province or territory. A processing centre may also be a depot, such as Raven Recycling in Whitehorse. A processing centre has a contract to:

- Operate according to standards set by legislation or the program administrator.
- Coordinate transportation from depots, and to markets.
- Find markets for the materials they collect and coordinate sales.
- Sort and bale containers, according to requirements of the markets.
- Record and report the number and type of containers, and refunds paid.
- May do some administration, such as pay depots.

The processing centres usually keep the money they make from selling materials. It is to their advantage to develop long-term and stable business relationships with buyers.

Administering a Deposit/Refund Program

Programs in other Canadian jurisdictions are administered either by government, industry, or a board with representation from a variety of stakeholders. Administrators are usually expected to:

- License distributors and/or manufacturers.
- Register containers, where required.
- Give permits and sign contracts with depots and processing centres to collect and process empty containers.
- Inspect and monitor distributors, processing centres, and depots.
- Do budgets, accounting and audits, and make payments.
- Make decisions about how to use the money from unredeemed deposits. Unredeemed deposits is the money from refunds that people didn't collect.

Paying for a Deposit/Refund Program

Fees are collected to pay for administration, depots, processing, and transportation. Fees can come directly from consumers, when the deposit is more than the refund. Fees can also come directly from industry, although consumers probably still pay. Fees can be hidden in the retail price. For example, the NWT Liquor Commission includes a $.02 fee per container in the retail price.

Fees are called handling fees, environmental fees, and processing fees. Fees in Canada range from $.02 to $.40 per container, depending on the type and size of container.

The Deposit/Refund System

Follow the Drink Container Follow the Deposit / Refund $$$

Distributors sell 'ready-to-serve' drinks to retail stores. Distributors collect deposits from retail stores and pay that money to the administrators.

Retail stores collect the deposit when they sell a drink and pay the deposit to the distributors.

Administrators oversee the program and the people who operate it. They receive the money from deposits, and pay for refunds, fees and transport.

Consumers pay a deposit when they buy a drink and get a refund when they return the container. People, restaurants, hospitals and other institutions can all be consumers.

A **processing centre** is where all the depots send empty containers. The processing centre sends refillable containers back to the industry. Non-refillable containers are sorted, baled and transported to recycling markets. In one province or territory, there are probably lots of depots and only one or two processing centres.

A **depot** takes empty containers and gives out refunds. Depots collect, sort and bag empty containers, and send them to a processing centre.

Non-refillable containers go to recycling markets, where they are processed and made into other things. There are markets in Alberta and Vancouver for all the empty drink containers from the NWT.

Refillable Containers go back to the drink industry. They get washed and used again. Some containers get refilled more than 15 times.

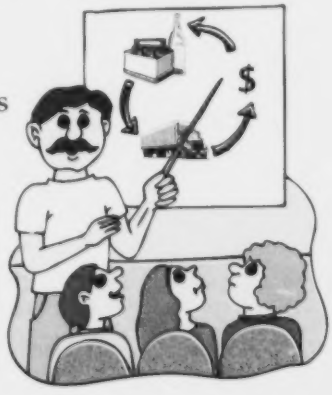
A Proposal for a Beverage Container Recovery Program in the NWT

This proposal is one option of how a beverage container recovery program might operate in the NWT. It is presented for discussion. The GNWT encourages people to present other options or variations on this option, during the consultation.

Principles of a Beverage Container Recovery Program for the NWT

The GNWT proposes the following principles as useful criteria to develop and implement a NWT beverage container recovery program.

- *Revenue neutral to government* – Ongoing, operating costs will be paid by revenue from the beverage container recovery program and not the government. The program will not be a source of general revenue for the government.
- *Universal access and participation* – All NWT residents can participate in the program.
- *Reduce, reuse, recycle* – Reduce the amount of waste, reuse materials, and recycle materials.
- *Polluter pays* – Polluters, including manufacturers and consumers, pay to prevent, control and fix pollution problems.



- *Product stewardship* – Manufacturers are responsible for their product from beginning to end, including disposal.
- *Full cost accounting* – All costs and benefits from beverage container recovery have value, including things such as air and water quality, employment, and sustainable use of resources.

Are these the principles that should guide a NWT beverage container recovery program?

Should other principles be included?

Objectives of a Beverage Container Recovery Program for the NWT

The GNWT proposes that a beverage container recovery program for the NWT have the following objectives:

- Conserve resources,
- Increase recycling,
- Reduce the amount of waste going to landfill,
- Reduce litter,
- Provide employment, especially for disadvantaged people, and
- Support better waste management practices.

Do these objectives describe what we want to achieve in the NWT with a beverage container recovery program?

Should other objectives be included?

Method Used to Collect Empty Containers

The GNWT proposes a deposit/refund system. To be effective, this type of program usually requires government legislation.

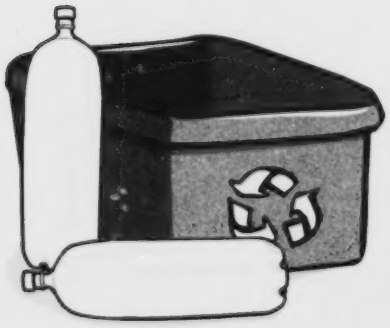
Should the GNWT program be voluntary or based on legislation? Why?

Designated Containers

The GNWT proposes a deposit/refund system where all ready-to-serve drinks, except milk, are included as designated containers. Liquor, wine and beer containers that are part of the NWT Liquor Commission program would be included. Twenty-five (25) million ready-to-serve drinks are sold in the NWT in one year. Appendix III shows the number, weight and volume of the different types and sizes of designated containers.

Should all ready-to-serve drink containers, except milk, be part of the program?

Should liquor, wine and beer containers be part of the same program?



Deposits, Refunds, and Fees

The GNWT proposes to charge a deposit of $.15 on designated containers less than one litre, and a deposit of $.35 on designated containers one litre or more. The proposed refund is $.10 and $.25. The difference between the deposit and the refund is the fees. Appendix IV shows designated containers with the proposed deposit, refund and fees.

Containers that are part of the Brewers Distributing deposit/refund system would be charged a $.05 fee in the NWT. These containers would still carry the existing $.10 deposit and refund from Brewers Distributing.

What amount of deposit and refund is acceptable to NWT consumers?

What amount of deposit and refund will motivate people to return their containers?

Should all deposits, refunds, and fees be advertised at retail?

Collecting and Processing Empty Containers

The GNWT thinks that every community should have at least one place where people can take their empty containers and get a refund. It could be a store or a depot.

Based on transportation patterns and population, the GNWT proposes that processing centres be set up in Yellowknife and in Hay River. The processing centres may also operate as a depot.

There will be standards of operation for depots and processing centres, for example the amount of space, operating hours, how to sort and bag containers, or maximum number of containers from one person in one day. Some standards, such as hours of operation for a depot, may vary depending on the size of the community. Depots and processing centres will operate on a contract basis and payments will be made based on fees per container. The objectives and principles of the program will guide contracting decisions.

What potential is there for partnerships, especially for processing centres?

What is the role of government, business, and non-profit groups?

Administering the Program

The GNWT proposes that the Department of Resources, Wildlife and Economic Development administer the program, at least initially. A multi-stakeholder committee could be formed to give advice and guidance to the program. The government will provide start-up funding, which will be repaid by the program.

The GNWT recognizes that the people who administer the program need to be involved with ongoing research and community development work to achieve the objectives of the program.

Should the GNWT administer the program? If not, who should? Why?

Should there be a multi-stakeholder committee? What should be the role of the committee? Who should be a member?

Unredeemed Deposits

The GNWT proposes that unredeemed deposits be used first to pay back the start-up costs of the program, second to enhance the beverage container recovery program, and third to support other reuse or recycling efforts.

How should decisions be made about using unredeemed deposits?

What should the money be used for?

Transportation

Transportation is a huge factor for beverage container recovery in the NWT. There are two stages:

- Transporting containers from communities to processing centres, and
- Transporting containers from processing centres to southern markets.

The following guidelines could make transport more efficient and effective:

- Transport that brings products to communities should take empty containers out.
- Full loads are cheaper than half loads.
- One material per truckload and one market stop is more efficient and cheaper than multiple materials and multiple stops.
- A negotiated contract or rate agreement usually gives the best price and most reliable service.
- Materials need to packaged and located so that they are easy to load and unload.

Transporting Empty Containers from Communities to a Processing Centre

The GNWT proposes that communities transport empty containers to a processing centre in Yellowknife or Hay River at least once a year, using all-weather roads, winter roads, and barges. Wekweti is one community where air transport is the only commercial option. Containers will be transported based on factors such as the weight and volume of containers collected; the method and availability of transport; and cost.

Appendix V is a summary of frequency, method, and cost of transporting empty containers from NWT communities to a processing centre in either Hay River or Yellowknife. Based on the assumptions made in this proposal, the total cost is about $160,000 per year.

Transporting Containers from a Processing Centre to Southern Markets

The GNWT proposes that processing centres transport materials to southern markets in the most cost-effective and efficient manner possible, based on principles such as those listed above. Processing centres need to be able to store enough bales of one material to have a full truckload. There are markets in Edmonton and Calgary to recycle all empty drink containers except tetra packs. They need to go to Vancouver. Processing centres usually keep the money they make from selling materials. Prices for different materials can change quite a bit over time.

Appendix VI is a summary of the cost of transporting empty containers from Yellowknife or Hay River to Edmonton. Based on the assumptions made in this proposal, the total cost is about $100,000 per year.

How can transport be organized to make sure that it is the most cost-effective and efficient method possible?

A Budget Estimate for the Proposed NWT Beverage Container Recovery Program

The following budget estimate uses information from Appendices IV, V, and VI. This estimate is for operations. Start-up costs are different and are not identified here. In the Yukon, the program repaid start-up costs in the first two years of operation.

Revenue:

Deposits $3,957,475.00

Expenses:

Refunds (based on 75% return) $1,939,368.75

Transportation (about 19% of total fees)[1]

- from the NWT to southern markets $100,000.00
- from NWT communities to processing centres $160,000.00

Administration Costs (10% of total fees)[2] $137,165.00

Processing Costs (33% of total fees)[2] $452,644.50

Collection Costs (33% of total fees)[2] $452,644.50

GST (included in fees) $89,734.00

Total Expenses $3,331,556.00

Unredeemed Deposits (based on 75% return) $646,456.25

Total Expenses + Unredeemed Deposits[3] $3,978,012.25

1. Transportation costs are for 100% of containers, the maximum amount that might be needed. In the real world, fewer than 100% of containers will be returned and transported.

2. Fees pay for the program. The money available for administration, collection, processing and transportation is a percent of total fees. Depots and processing centres will receive money based on the actual number of containers they handle and process.

3. Unredeemed deposits are not part of the operating revenue and expenses. The amount of money from unredeemed deposits depends on the number of containers that are returned for a refund. A successful program means a lot of containers are returned and there is less money from unredeemed deposits. A less successful program means fewer containers are returned and there is more money from unredeemed deposits. The GNWT proposes that money from unredeemed deposits will first be used to pay back start-up costs of the program, second to enhance the program, and third to support other reuse and recycle efforts.

Appendix I:

Glossary

'Ready-to-Serve' Beverage

A ready-to-serve beverage is a drink that you don't have to mix with water or any other liquid. Examples are pop, juice, and bottled water.

Beverage Container

A beverage container is a bottle or box that holds a drink. It is usually made from glass, plastic, aluminum, cardboard or a combination of materials, like tetra packs.

Beverage Container Recovery

To collect, reuse and/or recycle drink containers. They don't go in the garbage.

Beverage Container Legislation and Regulations

The laws that tell consumers, distributors, and other people what must happen, to reuse and recycle drink containers.

Deposit/Refund

People pay extra money or a deposit when they buy a drink. They get a refund when they return the container. A deposit/refund system is used to motivate people to return their empty drink containers. Sometimes the deposit and refund are the same. Sometimes the deposit is more than the refund.

Designated Containers

Designated containers are drink containers that are part of a deposit/refund system.

Fees

Fees pay for the program. Fees can come directly from industry or they can come from consumers, when the deposit is more than the refund.

Unredeemed Deposits

Everyone pays a deposit, but some people don't return their container to get a refund. Unredeemed deposits are all the money from refunds that aren't collected.

Appendix II:

Summary of Canadian Beverage Container Recovery Programs (Page 1 of 3)

	Legislation	Objectives	Administration	Depots and Processing Centres	Designated Containers, Recovery Rate Deposit, Refund, Fees	Unredeemed Deposits
Yukon Population 31,768	Beverage Container Regulations Recycling Fund Regulations Started 1992	Reduce waste volume, reduce litter, conserve resources.	Yukon Territorial Government, with an Advisory Committee.	25 registered depots. (non-profits, liquor retail, business). 3 processing centres. Raven Recycling is the biggest.	All containers except milk. Recovery: 83% overall Deposit: $.10, $.15, $.35 Refund: $.05, $.10, $.25 Fees: difference between deposit and refund.	To Recycling Fund. Pays for program and other recycling projects.
British Columbia Population 3,668,400	Beverage Container Stewardship Program Regulations Started 1970	Product stewardship. Owners collect and refill or recycle containers. 85% recovery by 2000.	Encorp Pacific (represents 180 brand owners). Liquor Distributors. Brewers Distributors.	160 depots and retail. Encorp Pacific processes non-alcohol. Alcohol and beer collection and processing contracted to Wastetech Holdings Ltd.	All containers except milk. Beer and alcohol separate. Recovery: 80% non-alcohol, 93% refillable beer. Deposit and full refund: $.05, $.10, or $.20 Fees: Encorp calculates annual cost per type of container. Industry pays.	Kept by Encorp Pacific. Used to reduce the cost per container for brand owners.
Alberta Population 2,944,923	Beverage Container Recycling Regulations	Provide leading, innovative, accessible, and cost-effective beverage container management system.	Beverage Container Management Board (BCMB, a legislated body that represents industry, consumers, government).	207 depots and retail. Retail only take refillables. Alberta Beverage Container Recycling Corporation does transport and processing.	All containers except milk. Recovery: 78% overall. Deposit and full refund: $.05, $.10, or $.20 Fees: Set by BCMB bylaws. Range from $.03 to $.05. Industry pays.	Kept by industry.
Saskatchewan Population 1,025,595	Litter Control Regulations Litter Control Designations Regulations	Increase recycling, employ disadvantaged people, collect and recycle non-refillable containers.	Saskatchewan Government.	Exclusive contract with SARCAN. They manage 72 depots and 3 processing centres.	All containers except milk. Recovery: 94% overall. Deposit: $.10, $.20, $.40, $.80 Refund: $.05, $.10, $.20, $.40 Fees: Difference between deposit and refund.	To government general revenue. Pays for the program.

Appendix II:

Summary of Canadian Beverage Container Recovery Programs (Page 2 of 3)

	Legislation	Objectives	Administration	Depots and Processing Centres	Designated Containers, Recovery Rate Deposit, Refund, Fees	Unredeemed Deposits
Manitoba Population 1,140,964	Manitoba Product Stewardship Program. No deposit / refund. Started 1995	Industry responsible to minimize waste from their products.	Manitoba Product Stewardship Corp. manages depots and curbside collection. Beer separate.	Curbside system collects beverage containers with other recyclables. Beer deposit / refund managed by beer industry.	Recovery: 95% beer, 30-40% other containers. Beer deposit and refund: $.10 Fees: $.02 per non-refillable container. Money goes to municipalities for curbside collection.	Beer only. Kept by beer industry.
Ontario Population 11,404,750	Soft Drink Regulations 1985 (not enforced) 3 Rs Regulations 1992	30% containers should be refillable. It's really less than 2%. Municipalities over 5,000 set up curbside collection.	Waste Diversion Organization. To find options for 50% of net operating costs for curbside collection. Beer separate. Soft drinks separate.	Beer and soft drinks return to retail. Other containers no deposit / refund, collected by Blue Box, curbside collection system.	Recovery: 98% beer, 35-50% others through curbside collection. Deposit and refund: $.10 beer, $.40 refillable soft drink. Fees: No fees. Recovered aluminum cans provide 30-40% total curbside collection revenue.	Kept by industry.
Quebec Population 7,334,094	Law 87. Law on selling and distribution of beer and soft drinks in 1-way packaging. Started 1985	Deposit / refund for non-refillables, research, market development, tire stewardship, environmental promotion and education.	Recyc-Quebec (Quebec's Society for Recovery and Recycling).	All return to retail (about 10,000 places). Trucks deliver new product, pick up refillable beer and non-refillable soft drinks. Recycan collects non-refillable beer. Other containers – curbside collection.	Recovery: 76% overall for non-refillable beer and soft drinks, and 98% for refillable beer. Deposit and full refund: $.05 and $.20 non-refillable, $.10 refillable. Fees: $.02 recovery 'incentive' fee for non-refillable containers.	Go to Recyc-Quebec.
Nova Scotia Population 936,700	Beverage Container Regulations Waste Management Regulations	Part of overall waste reduction strategy. Target 50% by 2000. Container bans – steel, aluminum, and glass (reuse or recycle).	Resource Refund Recovery Board (RRFB – legislated industry group).	RRFB partners with municipalities, 90 Enviro-depots, regional processors, truck companies, Liquor Commission retail. Breweries do refillable beer.	All containers except milk. Recovery: 76% overall. Deposit: $.10 Refund: $.05 Fees: $.025 per container paid to depots.	50% to municipalities to offset diversion costs. 50% for education, staff, to develop markets.

Appendix II:

Summary of Canadian Beverage Container Recovery Programs (Page 3 of 3)

	Legislation	Objectives	Administration	Depots and Processing Centres	Designated Containers, Recovery Rate Deposit, Refund, Fees	Unredeemed Deposits
New Brunswick Population 759,300	*Beverage Container Act* and Regulations	Reduce litter, divert beverage containers from waste stream, encourage sound use of energy and resources.	Department of Environment and Local Government.	Encorp Atlantic – non-alcohol. Rayan Industries – alcohol and beer cans. Breweries do refillable beer. 89 depots.	All containers except milk. Recovery: 78% overall. Deposit: $.10 Refund: $.05 non-refillable, $.10 refillable. Fees: $.03 paid to depots. $.02 for refillable beer.	Environmental Trust Fund – used for environmental programs.
Newfoundland Population 543,249	Beverage Recycling Program Started 1997	Develop, implement, and manage waste diversion. Target recovery rates for beverage containers: 50% to 80% in 4 years.	Multi-Materials Stewardship Board (industry, consumer organizations, and government). Beer managed by industry.	Newfoundland Beverage Recovery Inc. (industry) manages 37 Green Depots and over 50 satellite depots (schools, retail, business). 4 processing centres.	All containers except milk, refillables, and > 5L. Recovery: beer 96%, others 52%. Deposit: $.06 and $.20 Half-back refund: $.03 non-alcohol, $.10 alcohol. Full refund refillable beer: $.10 Fees: $.0275 per container.	Some money goes to "Waste Management Trust Fund" – used to close and establish new landfills, and waste diversion.
Prince Edward Island Population 130,000	Deposit/return legislation Ban non-refillable beer and soft drink containers. 1973 and 1977	Product stewardship. Owners collect and refill.	Seamans Beverages and Coca-Cola. PEI Liquor Control Commission. Brewers industry.	15 depots and retail. Beer and liquor separate system. Waste Watch program (curbside collection) to be expanded to include other, non-refillable containers in 2001.	Soft drinks and alcohol. Recovery: 60% wine and liquor, 98% soft drinks, 95% beer. Deposit: $.20, $.40, $.80 Min. refund: $.17, $.35, $.70. Half-back alcohol: $.05 and $.10. Beer: $1 per doz., $.07 each. Fees: $.03, $.05, $.10. $.02 for beer and alcohol.	Kept by industry for beer and soft drinks. Kept by government for alcohol.
Northwest Territories Population 43,000	No legislation or regulations	Litter control for alcohol beverage containers. No requirement to recycle.	Liquor Commission. Brewers Distributing separate program.	Depots in 5 communities – local business. No centralized processing. Glass and plastic to landfill.	Spirits, wine and beer. Recovery: 70% (2000) Deposit: $.10 and $.25 Full refund. Fees: $.02 per container hidden in retail.	Kept by the Liquor Commission.

Appendix III:

Total Ready-To-Serve Drinks Sold in the NWT in a Year by Number, Weight, Volume

	Number 1992 Stanley Report	Adjusted Number 2000[1]	Weight per 1000 Containers in Kg[2]	Total Weight in Kg	Volume per 1000 Containers in Cubic Feet[3]	Total Volume in Cubic Feet (not baled)
Aluminum non-alcohol	8,453,147	12,000,000	17	204,000	19	228,000
Plastic < 1L	234,150	1,600,000	25	40,000	29	46,400
Plastic 1L and more	233,803	800,000	50	40,000	109	87,200
Tetra < 1L	60,848	1,000,000	14	14,000	11	11,000
Tetra 1L and more	132,090	200,000	31	6,200	43	8,600
Glass non-alcohol	n/a	100,000	178	17,800	25	2,500
Steel can	11,637	5,000	75	375	63	315
Aluminum beer	3,479,319	3,714,480	17	63,146	19	70,575
Glass beer and coolers	6,274,489	417,520	227	94,777	32	13,361
Brewers Distributing	n/a	5,000,000	227	1,135,000	32	160,000
Glass wine/liquor	734,935	695,000	549	381,555	63	43,785
Plastic wine/liquor	n/a	50,500	40	2,020	63	3,182
Milk plastic all sizes	3,762,835	5,500,000	60	330,000	109	599,500
Milk tetra all sizes	276,426	400,000	31	12,400	43	17,200
Total	23,653,679	31,482,500		2,341,273		1,291,617
Total without milk	19,614,418	25,582,500		1,998,873		674,917

1. The number of containers is adjusted from the numbers provided in the Stanley Report, 1992, for the Northwest, Southwest and Mackenzie River. Adjustments are based on four things. 1) Changes in population from those used in the Stanley Report to the NWT Bureau of Statistics population figures for 2000. 2) Growth of the 'ready-to-serve' drink market. 3) Changes in the market share of different sizes and types of containers. 4) Results of a 2000/2001 survey and/or interview to determine the number and type of containers sold in a year in the NWT. Information from 6 main distributors was gathered.
2. Weight per 1,000 containers was taken from the 1992 Stanley Report.
3. Volume per 1,000 containers was calculated independently. The volume is for loose, not baled containers.

Appendix IV:

Proposal for NWT Beverage Container Deposits, Refunds, and Fees

	Number Sold in a Year	Assume Deposit of...	Total Deposits	Assume Refund of...	Total Refunds Paid Based on 75% Return	Total Fees (deposit minus refund)	Unredeemed Deposits	Fees plus Unredeemed Deposits
Aluminum non-alcohol	12,000,000	$0.15	$1,800,000.00	$0.10	$900,000.00	$600,000.00	$300,000.00	$900,000.00
Plastic < 1L	1,600,000	$0.15	$240,000.00	$0.10	$120,000.00	$80,000.00	$40,000.00	$120,000.00
Plastic 1L and more	800,000	$0.35	$280,000.00	$0.25	$150,000.00	$80,000.00	$50,000.00	$130,000.00
Tetra pack < 1L	1,000,000	$0.15	$150,000.00	$0.10	$75,000.00	$50,000.00	$25,000.00	$75,000.00
Tetra pack 1L and more	200,000	$0.35	$70,000.00	$0.25	$37,500.00	$20,000.00	$12,500.00	$32,500.00
Glass non-alcohol	100,000	$0.35	$35,000.00	$0.25	$18,750.00	$10,000.00	$6,250.00	$16,250.00
Steel can	5,000	$0.35	$1,750.00	$0.25	$937.50	$500.00	$312.50	$812.50
Aluminum beer can	3,714,480	$0.15	$557,172.00	$0.10	$278,586.00	$185,724.00	$92,862.00	$278,586.00
Glass beer and coolers	417,520	$0.15	$62,628.00	$0.10	$31,314.00	$20,876.00	$10,438.00	$31,314.00
Brewers Distributing[1]	5,000,000	$0.05	$500,000.00	$0.00	$187,500.00	$250,000.00	$62,500.00	$312,500.00
Glass wine and liquor	695,000	$0.35	$243,250.00	$0.25	$130,312.50	$69,500.00	$43,437.50	$112,937.50
Plastic wine and liquor	50,500	$0.35	$17,675.00	$0.25	$9,468.75	$5,050.00	$3,156.25	$8,206.25
Milk – plastic	5,500,000	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Milk – tetra	400,000	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total without milk	25,582,500		$3,957,475.00		$1,939,368.75	$1,371,650.00	$646,456.25	$2,018,106.25

1. The NWT fee will pay to collect, process and transport these refillable containers. Refunds would still be reimbursed through the Brewers Distributing.

Appendix V:

Annual Cost of Transport; based on Weight;
from NWT Communities to Yellowknife or Hay River

	Population 2000 Total: 41,919	Number of Containers (no milk) (% of total)	Weight of Containers in Kg (% of total)	Volume of Containers in Cubic Ft (% of total)	Transport Option	How Often Transport	Cost Estimate of Transport
To Yellowknife from:							
Rae-Edzo	1,864 (4.5%)	1,151,213	89,949	27,520	Road	4 per year	$4,000
Wha Ti	476 (1.1%)	281,408	21,988	6,727	Winter road	1 per year	$5,000
Rae Lakes	278 (.7%)	179,078	13,992	4,281	Winter road	1 per year	
Wekweti	154 (.4%)	102,330	7,995	2,446	Air	1 per year	$10,000
Lutsel k'e	377 (.9%)	230,243	17,990	5,504	Barge	1 per year	$4,700
Yellowknife and Dettah	18,231 (43.5%)	11,128,388	869,510	266,031	Road	n/a	n/a
YK Subtotal	21,380 (51%)	13,072,658	1,021,424	312,510			$23,700
To Hay River from:							
Fort Smith	2,625 (6.3%)	1,611,698	125,929	38,529	Road	6 per year	$6,000
Fort Resolution	562 (1.3%)	332,573	25,985	7,950	Road	1 per year	$1,000
Hay River	4,103 (9.8%)	2,507,085	195,890	59,933	n/a	n/a	n/a
Enterprise	88 (.2%)	51,165	3,998	1,223	Road	n/a	n/a
Fort Providence	837 (2%)	511,650	39,977	12,231	Road	2 per year	$2,000
Kakisa	36 (.09%)	23,024	1,799	550	Road	1 per year	$1,000
Trout Lake	68 (.2%)	51,165	3,998	1,223	Winter road	1 per year	$1,000
Jean Marie River	53 (.1%)	25,583	1,999	612	Barge	1 per year	$400
Fort Simpson	1,273 (3%)	767,475	59,966	18,347	Road	3 per year	$6,000
Fort Liard	524 (1.3%)	332,573	25,985	7,950	Road	1 per year	$2,000
Nahanni Butte	82 (.2%)	51,165	3,998	1,223	Road	1 per year	
Wrigley	183 (.4%)	102,330	7,995	2,446	Road	1 per year	$1,000
Tulita	506 (1.2%)	306,990	23,986	7,339	Barge	1 per year	$5,000
Fort Good Hope	747 (1.8%)	460,485	35,980	11,008	Barge	1 per year	$7,000
Norman Wells	882 (2.1%)	537,233	41,976	12,843	Barge	1 per year	$7,000
Deline	645 (1.5%)	383,738	29,983	9,173	Winter road	1 per year	$5,000
Colville Lake	96 (.2%)	51,165	3,998	1,223			
Tsiigehtchic	195 (.5%)	127,913	9,994	3,058	Barge	1 per year	$2,600
Fort McPherson	910 (2.2%)	562,815	43,975	13,454	Barge	1 per year	$11,500
Inuvik	3,451 (8.2%)	2,097,765	163,908	50,148	Barge	2 per year	$40,000
Aklavik	748 (1.8%)	460,485	35,980	11,008	Barge	1 per year	$9,000
Tuktoyaktuk	979 (2.3%)	588,398	45,974	14,066	Barge	1 per year	$12,000
Sachs Harbour	153 (.4%)	102,330	7,995	2,446	Barge	1 per year	$3,500
Holman	470 (1.1%)	281,408	21,988	6,727	Barge	1 per year	$9,500
Paulatuk	323 (.8%)	204,660	15,991	4,893	Barge	1 per year	$7,000
HR Subtotal	20,539 (49%)	12,532,867	979,248	299,606			$139,500
NWT Total		25,605,524	2,000,672	612,115			$163,200

Appendix VI:

Annual Cost of Transport; Based on Weight; from Hay River or Yellowknife to Edmonton

	Total Number of Containers	Total Weight in Kg	Number of Trucks Based on 20,000 Kg per Truck	Cost per Container Based on $1,000 per Truck	Total Cost per Container Type
Aluminum non-alcohol	12,000,000	204,000	10.20	$0.001	$10,200.00
Plastic < 1L	1,600,000	40,000	2.00	$0.001	$2,000.00
Plastic 1L and more	800,000	40,000	2.00	$0.003	$2,000.00
Tetra < 1L	1,000,000	14,000	0.70	$0.001	$700.00
Tetra 1L and more	200,000	6,200	0.31	$0.002	$310.00
Glass non-alcohol	100,000	17,800	0.89	$0.009	$890.00
Steel can	5,000	375	0.02	$0.004	$18.75
Aluminum beer	3,714,480	63,146	3.16	$0.001	$3,157.30
Glass beer and coolers	417,520	94,777	4.74	$0.011	$4,738.85
Brewers Distributing	5,000,000	1,135,000	56.75	$0.011	$56,750.00
Glass wine and liquor	695,000	381,555	19.08	$0.027	$19,077.75
Plastic wine and liquor	50,500	2,020	0.10	$0.002	$101.00
Milk plastic all sizes	5,500,000	330,000	16.50	$0.003	$16,500.00
Milk tetra all sizes	400,000	12,400	0.62	$0.002	$620.00
Total	31,482,500	2,341,273	117		$117,063.65
Total without milk	25,582,500	1,998,873	100		$99,943.65